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ABSTRACT

With the rapid development of computer technology in recent years, distance education, and especially computer-mediated communication (CMC), has expanded very quickly. The application of computer technology in education presents many unanswered questions, including issues related to impression formation and impression management in computer-mediated environments. This paper reviews the knowledge base for verbal and nonverbal factors affecting impression formation in both face-to-face (FtF) and CMC environments. Based on this review, instructional strategies for achieving effective communication and a positive impression in CMC distance education courses are proposed. Verbal strategies include: following language norms; using standard discourse schemas selectively; using pragmatic and syntactic codes selectively; using intense language; using immediate language; using diverse language; using powerful language style; selecting the appropriate verbal influence strategy; and using appropriate ironic remarks. Nonverbal strategies include: using paralinguistic cues such as emoticons appropriately; taking into account chronemics; maintaining a high frequency of messaging; maintaining longer duration messages; maintaining a fast reply of messaging; manipulating primacy effect; manipulating recency effect; and ensuring no typing errors. (Contains 45 references.) (Author/MES)

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INSTRUCTIONAL STRATEGIES FOR ACHIEVING A POSITIVE IMPRESSION IN COMPUTER-MEDIATED COMMUNICATION (CMC) DISTANCE EDUCATION COURSES

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Abstract

With the rapid development of computer technology in recent years, distance education, and especially computer-mediated communication (CMC), have expanded very quickly. The application of computer technology in education presents many unanswered questions, including issues related to impression formation and impression management in computer-mediated environments. This paper reviews the knowledge base for verbal and nonverbal factors affecting impression formation in both face-to-face (FtF) and CMC environments. Based on this review, instructional strategies for achieving effective communication and a positive impression in CMC distance education courses are proposed.

Introduction

A growing body of research has consistently indicated that distance education technology has significant effects on instruction and administration (Phipps & Merisotis, 1999). There are two different formats of distance education: interactive television instruction (ITV) and Web-based instruction (WBI). Currently, the use of WBI tends to be increasing and almost every professional organization's publications and conferences have shown a substantial increase in the attention given to WBI and distance education

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(Simonson, Smaldino, Albright, & Zvacek, 2000). While many aspects of distance education are being investigated, one area of central concern is computer-mediated communication. There is a growing body of evidence (Walther, 1992) that communication processes may be affected differently when students and teachers communicate via technology rather than directly in FtF environments. In particular, the attributions that students make and the impressions they form regarding their teachers and the instructional process may be constrained or promoted by the medium of communication. Particularly for students that are new to instruction via technology, these impressions may have much to do with their satisfaction and learning. Students' judgments about the teacher and the course often affect the efficacy of the instructional process, either positively or negatively. In most FtF classrooms, knowledgeable teachers can and do promote attributions by students that will facilitate the instructional process. However, there have not been many studies on strategies of impression management in CMC distance education courses, even though these types of distance education courses are becoming common. Therefore, this paper is intended to suggest strategies for instructors who wish to achieve positive impressions of both themselves and the instructional process in CMC distance education courses.

In the remainder of this paper, factors that affect impression formation in FtF environments and CMC environments will be identified and briefly described. After this description, recommendations for achieving positive impression formation in CMC distance education courses will be presented.

Literature Background

FtF Environments

Both nonverbal and verbal factors have been explored widely since they both influence people's impression formation in FtF environments. In particular, the influences of nonverbal factors have been more extensively studied than the influences of the verbal cues. According to Patterson (1994), nonverbal cues can be managed to achieve particular interpersonal goals, such as engaging other people. A review of the literature indicates that the influences of three major categories of nonverbal factors have been identified. These nonverbal factors are: (1) visible cues, (2) paralinguistic cues, and (3) psychological cues (Liu, 2000).

Visible nonverbal cues include facial expression (Ottatti, Terkildsen, & Hubbard, 1997), eye contact (Winkel & Vrij, 1990), touch (Burgoon & Walther, 1990), dress style (Vrij, 1997), and body posture (Burgoon & Walther, 1990), as well as physical appearance (Butler, Pryor, & Grieder, 1998) and ethnicity (Chia & Jih, 1994). Paralinguistic cues include continuously coded behaviors such as fundamental voice frequency, vocal intensity, speech duration, speech rate, pauses, and response latency (Street, 1990). Finally, psychological cues include a communicator's individualistic traits such as attention, attribution, mood, primacy effect, and recency effect.

While nonverbal cues have received considerable attention for their influence on impression formation in FtF environments, the influences of language variables on impression formation have not received enough attention until recently (Bradac & Street, 1989/90). The language cues primarily explored in recent literature have focused mainly on the following aspects (2000):

1. Language norms: Norm deviations or violations reduce the subject's perception of the norm violator's attractiveness and affect their ability to confidently predict and explain behavior (Berger, Gardner, Parks, Schulman, & Miller, 1976).
2. Standard discourse schemas: There are three standard classes of discourse schemas in the language: interpersonal schemas, rhetorical schemas, and narrative schemas. Interpersonal schemas refer to conventions for establishing interpersonal interactions between the communicators. Rhetorical schemas refer to conventions for laying out a reasoning sequence which the writer wants the reader to follow. Narrative schemas refer to conventions for connecting a sequence of language into a coherent text (Winograd, 1977).
3. Pragmatic and syntactic codes: There are two basic codes in communication: pragmatic and syntactic. The pragmatic code is verbally and theoretically associated with the oral communication style in which context and shared background are essential. The syntactic code is associated with a style that is less context driven, more explicit, and more differentiated. These two codes differ in a variety of ways. The pragmatic code is associated with high engagement, while the syntactic code is related to detachment or low engagement (Ellis, 1992).
4. Language intensity: Language intensity refers to whether a communicator's description of a concept deviates from neutrality. Language intensity is not only directly related to a receiver's attributions of internality to communicators, but also very much related to the features of the particular communication context (Bowers, 1963).
5. Verbal immediacy: Verbal immediacy refers to whether a communicator relates himself/herself to the topics of the message. Verbal immediacy affects a receiver's judgments of a communicator's positive affect and competence, as well as character (Bradac, Bowers, & Courtright, 1980).
6. Powerful vs. powerless styles: The powerless style is characterized by verbal hedges, intensifiers, hesitation forms, polite forms, and questioning intonations, while the powerful style is characterized by less frequent use of these features. Communicators using the powerless language style are not necessarily low in social status, social power, or competence, but may convey that impression due to the use of powerless language style (Haleta, 1996).
7. Verbal influence strategies: There are three different paradigms in persuasive communication: passive message reception paradigm, active participation paradigm, and resistance to persuasion paradigm. The active participation paradigm results in a change in the roles by both persuader and persuadee while the other two do not (Burgoon & Miller, 1985).
8. Ironic remarks: Ironic criticisms convey information distinct from information conveyed by literal criticism. Specifically, people use irony over literal language because of the following advantages: (a) to be funny in communication, (b) to

reduce the edge of an insult, (c) to show themselves in control of their emotions when encountering offensive behavior or poor performance, and (d) to avoid hurting their relationships with the receiver (Dews, Kaplan, & Winner, 1995).

CMC Environments

Recent research indicates that there have been two dominant research models in CMC: the task-oriented model and the social-emotion-oriented model (Liu & Ginther, 1999). Both of these models have distinct implications for impression formation. The most well established model is the Social Presence Theory proposed by Short, Williams, and Christie (1976). According to this model, since CMC users cannot see each other, the CMC environment is restricted in terms of nonverbal cues. Thus, CMC tends to be tasked-oriented, depersonalized, and prevents the development of interpersonal relationships between CMC users. Most prior CMC research tended to be consistent with the model of the task-oriented communication (Connolly, Jessup, & Valacich, 1990; Hiltz, Johnson, & Turoff, 1986).

However, contrary to the task-oriented model, Walther (1992) proposed the Social Information Processing Model to explain how interpersonal relationships can be established in CMC environments. Specifically, this model explains how CMC communicators process social information using various media in CMC and FtF environments, as well as the effects of such information on interpersonal communication. For instance, CMC users can adapt their verbally transmitted or textual messages to improve impressions formed by their partners in CMC environments (Walther, 1993; Walther & Burgoon, 1992). In addition, some studies have found that CMC communicators are involved in both task-oriented communication and social-emotion-oriented communication (Tangmanee, 1999).

CMC not only involves verbal cues, but also involves nonverbal cues that can be manipulated to develop interpersonal relationships among CMC users (Walther, 1992). This is also consistent with MacKinnon's (1995) view that one's social currency is primarily based on the information he/she manages and the wit he/she contributes to it rather than media richness. In addition, recent research has pointed out that language in CMC environments has characteristics of both oral and written language. Interactive written discourse (IWD) in CMC is a hybrid that exhibits characteristics of both oral and written language. Norms for IWD are gradually emerging (Ferrara, Brunner, & Whittemore, 1991). In addition, according to Murray (1988), the use of characteristics such as personal involvement, integration, and the like, is primarily determined by the specific context rather than by whether the communication is written or oral. Thus, recent studies have investigated how CMC communicators are involved in social-emotion-oriented communication (Jacobson, 1999; Lea & Spears, 1992; Utz, 2000; Walther, 1996; Walther & Tidwell, 1995; Walther & Burgoon, 1992).

Similar to FtF environments, impression development is an important topic in CMC (Walther, 1993). Therefore, there have recently been some studies investigating the effects of both verbal and nonverbal cues in CMC. Adkins and Brashers (1995) studied

the influences of powerful and powerless language styles on impression formation in decision-making CMC environments. Their results have indicated that a communicator using a powerful language style in CMC environments is perceived as more attractive, credible, and persuasive than the communicator using a powerless language style. Adkins and Brashers concluded that powerful and powerless language styles had a great influence on impression formation in CMC environments.

A few recent studies have identified the existence of certain nonverbal cues in CMC and have investigated their effects on social-emotion development. These nonverbal cues include temporal aspects (Hesse, Werner, & Altman, 1988) or chronemics--time of sending and receiving a message (Walther & Tidwell, 1995), primacy and recency effects (Rintel & Pittam, 1997), pictographs or typographic marks and emoticons (Asteroff, 1987; Reid, 1995; Thompsen & Foulger, 1996), as well as frequency and duration (Liu, 2000).

The first category of nonverbal cues is chronemics or temporal aspects of CMC. Hesse, Werner, and Altman (1988) proposed a transactional framework to study temporal aspects in CMC interaction. According to Hesse et al., temporal aspects of CMC involves four major aspects: temporal scale, sequencing, pace, and salience. In addition, according to Walther and Tidwell (1995), chronemics is a very important nonverbal cue and can be transferred via CMC. Variations in chronemic cues can affect a communicator's judgments about their intimacy/liking or dominance/submissiveness in CMC relational communication.

The second category of nonverbal cues includes primacy and recency effects. According to Rintel and Pittam (1997), in order to achieve a positive impression on the desired receivers, there are critical factors for initial impression formation in the opening stage in an Internet Relay Chat (IRC) environment. These include the choice of names such as nicknames, the use of orthographic exaggeration, extension, expansion, and paralinguistic marks such as smileys. Therefore, according to Rintel and Pittam, the opening and closing phases of IRC interactions are crucial for the initiation, development, and maintenance of interpersonal relationships. Moreover, in terms of the general functions of the strategies used, interaction management in synchronous CMC interactions is similar to that in casual group FtF interactions. However, the content, structure, and ordering of the strategies are subject to modification. Therefore, it can be inferred that interaction management in FtF may be applicable to synchronous CMC interaction. Specifically, a communicator may achieve a positive primacy impression in the opening stage and achieve a positive recency impression in the closing stage.

The third category of nonverbal cues in CMC includes paralinguistic cues, such as pictographs or typographic marks and emoticons. According to Lea and Spears (1992), paralanguage is not only available in FtF interaction, but also available in written communication, which takes the form of typographical marks and other characteristics of the text. Paralanguage does convey socially shared meanings although it has no lexical meaning. Therefore, reading paralinguistic cues not only facilitate the understanding of the transmitted message, but also help define the message style from which receivers may

infer certain impressions about the communicator's personality traits. For instance, the appearance of typing errors in a message may imply that the sender is in a hurry when composing the message. However, the repetitive appearance of typing errors in a series of messages may imply that the sender is careless and incompetent. Similarly, repetitive use of typographical marks may imply that the sender is a lively and spontaneous person. Therefore, many researchers have proposed using pictographs or typographic marks and emoticons in CMC interaction because these marks can convey social emotions and reduce perceptions of flaming (Asteroff, 1987; Reid, 1995; Thompsen & Foulger, 1996). Specifically, emoticons may convey facetiousness and may also convey sarcasm. In addition, Lea and Spears found that spontaneously generated paralinguistic marks were related to impression formation for both novice and experienced CMC communicators and that whether their interpretation was positive or not completely depended on the pre-established groups or individualistic context of the interaction.

The final category of nonverbal cues includes frequency and duration of messaging, as well as latency of response. According to Rice and Love (1987), frequency and duration of messaging are two major aspects related to the amount of CMC information communication. Frequency is similar to "latency of verbal response" (Willard & Strodtbeck, 1972) and refers to how quickly a communicator responds to begin a conversational turn. Duration is similar to the psychological trait of "duration of verbal response" (Koomen & Sagel, 1977) and refers to how long one communicates between conversational turns. A recent exploratory study (Liu, 2000) of the effects of frequency and duration of messaging on impression development in asynchronous CMC has indicated that duration and frequency had significant main effects on impression development. Specifically, this study suggests that frequency and duration of messaging are potentially important variables in CMC group communication; high frequency and long duration can help CMC users achieve a positive and competent impression from their CMC partners. The results of this study not only theoretically support Walther's Social Information Processing Model, but also lay foundations for further research in many popular types of interactive CMC environments, including e-commerce, e-health, and e-learning.

Strategies Of Achieving A Positive Impression In CMC Distance Education Courses

Based on the above review of research of impression formation in both FtF and CMC, many instructional recommendations for positive self-representation in CMC distance education courses can be proposed for the distance education instructor. These recommendations may be helpful in facilitating the interaction and relationship between the instructor and the students in both asynchronous and synchronous CMC. Some of the recommendations may be more helpful for asynchronous CMC while others may be more helpful for synchronous CMC. Specifically, these recommendations cover both verbal and nonverbal strategies.

First, verbal strategies:

1. Following language norms: CMC instructors should follow the emerging CMC language norms to express their attitudes and ideas. These include such norms as

greetings, information sequencing, reciprocity, and appropriate compliment giving. Otherwise, any norm violations will reduce the receiver's perceptions of the norm violator's attractiveness and affect their competence.

2. Using standard discourse schemas selectively: CMC instructors should select any of the three standard discourse schemas: interpersonal, rhetorical, and narrative schemas, in accordance with the nature of the topic being communicated. For instance, the interpersonal schemas are highly recommended for interpersonal communication (e. g., e-mail), especially for the frustrated/overwhelmed distant student.
3. Using pragmatic and syntactic codes selectively: CMC instructors should select any of the two basic codes: the pragmatic code or the syntactic code, in accordance with the nature of the topic being communicated. For instance, the syntactic code is highly recommended for task-oriented assignments, while the pragmatic code for emotion-oriented tasks.
4. Using intense language: CMC instructors should use appropriately intense language, such as strongly worded messages, to express their attitudes toward the topic being communicated. This will be especially helpful when the students are not sure about the topics/messages.
5. Using immediate language: CMC instructors should use strongly immediate language to express their attitudes toward the topic being communicated. The more immediate the language, the more positive the receiver's judgments of a communicator's competence, affect, and character. For instance, "We'll certainly enjoy this chapter" is more immediate than "You and I certainly will enjoy this chapter."
6. Using diverse language: CMC instructors should use a wide range of vocabulary to express their attitudes toward the topic being communicated. The wider the range of vocabulary, the more positive the receiver's judgments of a communicator's competence, SES, and message effectiveness. For instance, a variety of terms are used to refer to distance education, such as distance learning, teleconferencing, online learning, virtual learning, web-based instruction….
7. Using powerful language style: CMC instructors should use powerful language style to express their attitudes toward the topics being communicated. Specifically, their language style should not include such features as the use of hedges, hesitations, intensifiers, tag questions, and the like. For instance, when instructors want to communicate something important, they should use a powerful language style to achieve a positive impression from their students and influence their subsequent learning behaviors.
8. Selecting the appropriate verbal influence strategy: CMC instructors should select the appropriate verbal influence language when being involved in disagreements and/or persuasive learning tasks. In most cases, the active participation paradigm is highly recommended. Influence language should focus on reciprocity rather than being compensatory between students and instructors. In addition, CMC instructors should adapt their message content appropriately to fit their students' needs by understanding the latter's characteristics and perspectives.
9. Using appropriate ironic remarks: CMC instructors might very selectively use appropriate ironic remarks rather than literal paraphrase or criticism in some

special situations. In this way, instructors can eliminate potential insults and show greater control of their emotions if they are attacked or offended by students. This may be very important in the open public bulletin boards/forums. For instance, instructors might use ironic remarks rather then literal criticism to reduce a student's emotional frustrations when the latter involves poor performance or involves an inappropriate posting in the bulletin board.

Second, nonverbal strategies:

1. Using paralinguistic cues such as emoticons appropriately: CMC instructors can use paralinguistic cues such as emoticons appropriately to express their attitudes toward the topic being communicated. Most emoticons or smileys (e. g., ":-)", "J", ":-(", "L") are composed of keyboard symbols. Some are extremely simple and others are highly complex. Usually, an instructor's appropriate use of emoticons can give students a positive impression of a more vivid, dynamic, and graphic description of their feelings and actions than of a traditional textual description.
2. Taking into account chronemics: CMC instructors should take into account chronemics since it is a very important nonverbal cue in CMC environments. Chronemics may have important implications for CMC communications between different locations and/or different time zones. This may avoid misattribution, misunderstanding, and frustrations. For instance, emotion-oriented messages are recommended to be sent at night, while task-oriented messages in the day.
3. Maintaining a high frequency of messaging: CMC instructors should maintain a high frequency of messaging to express their attitudes toward the topic being communicated. For instance, instructors may maintain a high frequency of messaging to lead and facilitate the discussion in the bulletin boards/forums.
4. Maintaining longer duration messages: CMC instructors should maintain longer duration messages to express their attitudes toward the topic being communicated. For instance, instructors may present more extensive and complete messages to lead the discussion and describe thoroughly the topic being discussed.
5. Maintaining a fast reply of messaging: CMC instructors should maintain a fast reply of messaging to answer students' questions or concerns via a variety of ways, such as e-mail, voice-mail, bulletin boards/forums, and online chat. Doing so will help establish the student's confidence in the course and the instructor, as well as reducing students' frustrations.
6. Manipulating primacy effect: In online chats, CMC instructors should try to achieve a positive primacy effect in the opening stage, by saying "hello" to every member, or through the appropriate use of nick name, orthographic exaggeration, or smileys.
7. Manipulating recency effect. In online chat, CMC instructors should try to achieve a positive recency effect in the closing stage, by saying "Bye…." and simply exiting CMC interaction completely.
8. Ensuring no typing errors. CMC instructors should ensure that there are no consistent typing or spelling errors in the messages. Otherwise, the repetitive typing errors may convey the impression that the communicator is careless and

incompetent. Moreover, typing errors may cause misunderstanding. Thus, it is highly recommended to always check spelling in asynchronous CMC if possible.

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